PATENT APPLICATION NO.: 10/743,476

Docket No.: <u>678-1264(P11404)</u>

AMENDMENTS TO THE SPECIFICATION

Amend the paragraphs starting at line 26 on page 26 and continuing to page 27;

line 8 of submitted with the Preliminary Amendment dated January 20, 2005, as

follows.

Figure 9B shows an exemplary action selection method according to a graph

search strategy. Again, in stage 1 the process begins by determining the state of the world

(virtual environment), including the state of the intelligent agent and of the objects in the

world. In stage 211, the intelligent agent is queried. In stage 123, the intelligent agent

obtains a set of legal (permitted or possible) actions for each world object; preferably each

world object is queried as shown.

The method now branches into two parts. A first part, shown on the right, is

performed for each action path. In stage 413, an action to be performed is simulated. In

stage 514, the effect of the simulation is determined for the world, and is preferably

determined for each world object in stage 615. In stage 716, a grade is determined for the

effect of each action.

In stage \$17, the state of the objects and hence of the world is determined, as is the

overall accumulated reward of an action. In stage 918, the effect of the action is simulated

on the intelligent agent; preferably the effect between the intelligent agent and each world

object is also considered in stage 1019.

Turning now to the left branch of the method, in stage 1120, all of this information

is preferably used to determine the action path with the highest reward. In stage 1221, the

action is generated. In stage 1322, the action priority is set, preferably according to the

action grade or reward. In stage 2314, the action is placed in a queue at the action

manager, as for Figure 9A. In stage 2415, the action is considered by the action manager

according to priority; the highest priority action is selected, and is preferably executed in

stage 1625.

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